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MEMORANDUM FOR: Economic Defense Intelligence Committee

FROM : Chairman, EDIC

SUBJECT : The Strategic Importance of Aluminum and Its Source Materials (including bauxite) to the Sino-Soviet Bloc

REFERENCE : EDIC Case No. 18, SECRET/NOFORN

The attached intelligence document was prepared by CIA in response to the referenced EDIC case. It is now being distributed to EDIC members for review and comments.

If no request for committee consideration of this document is received by the close of business 6 May 1958, it will be regarded as approved and the case will be closed.

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Chairman [redacted] 25X1A9a

Attachment:
The Strategic Importance of Aluminum and its Source Materials to the Sino-Soviet Bloc

Distribution:
Cat B - (3-5, 8, 10)
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THE STRATEGIC IMPORTANCE OF ALUMINUM AND ITS SOURCE MATERIALS TO THE SINO-SOVIET BLOC

SUMMARY AND CONCLUSION

1. The Sino-Soviet Bloc is a net exporter of aluminum metal, but continues to import sizeable quantities of bauxite, the principal aluminum-bearing ore. It is not known to what extent these imports are essential to meet current Bloc requirements for aluminum, but there is reason to believe that they are motivated at least in part by political and economic, rather than by short-supply considerations.

2. Available intelligence information on Sino-Soviet Bloc consumption of aluminum is not sufficiently detailed to provide a clear use pattern. Among the principal users are the highly strategic aircraft, missile, and rocket industries, the electric power and communications industries, as well as various consumer goods industries. Generally speaking, the proportion of total aluminum output allocated to the various uses is believed to differ substantially from the use pattern prevalent in most western countries.

3. Recognizing the importance of aluminum and aluminum alloys to the growth and development of its economy, the Sino-Soviet Bloc has long sought to minimize its dependance upon Free World sources of supply. Towards that end, the USSR has conducted extensive research and experimentation to exploit available non-bauxite ores for their aluminum content. The USSR has now become a world leader in the production of aluminum from nepheline and alunite - its principal non-bauxite aluminous ores - and is planning a further expansion of aluminum production from these source materials. As a result of intensive mining of even low-grade bauxite ores and of the increasing exploitation of its plentiful deposits of nepheline and alunite, the Sino-Soviet Bloc supplies of workable aluminous raw materials have been greatly augmented, and the Bloc's dependence upon free world resources has been correspondingly reduced. Accordingly, it is not believed that the aluminum industry of the Sino-Soviet Bloc as a whole is vulnerable to free world controls over the export of bauxite or other aluminum source materials.

DISCUSSION

1. Production of primary aluminum in the Sino-Soviet Bloc is estimated to have been about 600,000 metric tons in 1956, and 730,000 metric tons in 1957 as follows:

Area	1956	1957
USSR	470,000	555,000
China	15,000	40,000
European Satellites	115,000	135,000
Total Bloc	600,000	730,000

Total aluminum production (primary and secondary) may have been as high as 900,000 metric tons in 1957, and there is little question but that aluminum output in the Bloc will continue to increase. The most significant increases in aluminum production are planned for the USSR and for Communist China.

2. Available intelligence information on Sino-Soviet Bloc consumption of aluminum and aluminum alloys is not sufficiently precise and detailed to permit the establishment of a use pattern. It can be stated, however, that except for use in aircraft, rocket, and missile production and in the manufacture of pots and pans, there is little to indicate that Bloc utilization of this product would be analogous to that of the Free World. On the contrary, limited observations suggest a pattern significantly different from that of the Free World.

3. There is no reason to believe that the Sino-Soviet Bloc suffers from any shortage of aluminum metal or alloys. It has been a net exporter of aluminum since 1955, when net exports were about 12,000 tons. In 1956, net exports reached about 25,000 tons, and may have been even greater. (For example, one unconfirmed statement in a Soviet publication claimed that 30,000 tons of aluminum were shipped to the West in 1956.) Incomplete data indicate at least 29,000 tons were exported in 1957. During that year the UK received 17,360 metric tons from the Soviet Bloc (15,696 from USSR) compared with 935 in 1956 (200 from USSR)*. The USSR accounted for the largest part of Bloc exports to the Free World, providing approximately 60 percent of net exports in both 1955 and 1956.

NET EXPORTS OF ALUMINUM
FROM THE SINO-SOVIET BLOC TO THE FREE WORLD
(In metric tons)

Area	1955	1956
USSR	7,200	14,800
Czechoslovakia	1,600	4,800
Hungary	2,700	3,400
Poland	300	1,600
China	Negl.	700
Total Bloc	11,800	25,300

* During January and February 1958 UK imports from the Bloc totaled 4,220 tons (3,690 from USSR).

4. While the Sino-Soviet Bloc has become a net exporter of aluminum, it continues to be a net importer of aluminous ore. Bauxite imports from Greece currently may be the source of 15 to 20 per cent of primary aluminum production in the USSR. Such sizeable imports do not necessarily imply that there is any shortage of aluminous ores in the Soviet Union. Factors such as cost, accessibility, urgency, and politics are all likely to have some bearing on the current and continuing Greek-USSR bauxite trade.

5. During the past few years, the USSR has reported the discovery of several new deposits of bauxite, the traditional raw material for aluminum production, and large deposits of other aluminous ores. The Soviets probably lead the world in both actual and planned production of non-bauxite ores such as nepheline and alunite for producing alumina. Moreover, more extensive use of these non-bauxites is planned for the future, and there is little question but that the USSR has the technical competence to achieve its planned goals. In short, it is difficult to visualize the possibility of any significant reduction in the growth of the Soviet aluminum industry resulting from a restriction on the importation of free world bauxite. At best, such restrictions might cause a short term reduction in output, but the end result might well be a considerably improved domestic industry based on newly discovered and developed indigenous resources, thus ensuring self-sufficiency.